CLAIM AMENDMENTS

Claim 1. (currently amended) A microfluidic ~~unit array~~ device ~~comprising~~ having a plurality of microfluidic units in an organized array, the device comprising: a first plate comprising an array of sample receiving elements; and a second plate comprising an array of microfluidic units, wherein each unit ~~comprising~~ comprises a microfluidic network of a plurality of reservoirs connected by interconnected channels of capillary dimensions including a ~~primary~~ main flowpath and at least one secondary flowpath, each unit having ~~a~~ one reservoir positioned ~~in the array in the same format of a source array of at least one of samples and reagents~~ for fluid communication with one sample receiving element of the first plate.

Claim 2. (currently amended) ~~A~~ The microfluidic ~~unit array~~ device according to Claim 1, wherein the number of said microfluidic units is a multiple of 8 ~~and each of the rows of units has at least 8 units~~.

Claim 3. (currently amended) ~~A~~ The microfluidic ~~unit array~~ device according to Claim 1, wherein said array of sample receiving elements has the spacing format ~~is~~ of a 96 well micro titer well format.

Claim 4. (currently amended) A microfluidic ~~unit array~~ device having a plurality of microfluidic units in an organized array, the device comprising: a first plate comprising an array of sample receiving elements; and a second plate comprising an array of microfluidic units, wherein ~~said microfluidic unit array comprises a substrate in which microfluidic units of said microfluidic unit array are formed, said~~ the microfluidic units ~~comprising~~ are comprised of a microfluidic network of a plurality of reservoirs connected by interconnected channels including a ~~primary~~ main flowpath and at least one secondary flowpath, ~~and~~ a film enclosing said interconnected channels, wherein each microfluidic unit has one ~~reservoirs for~~ receiving reservoir ~~at least one of samples and reagents are~~ positioned ~~in the array in the same format of a source array~~ for fluid communication with one sample receiving element of the first plate, and wherein ~~said source is a microtiter well plate having a~~ the number of ~~wells equal to~~ microfluidic units is a multiple of 8.

Claim 5. (currently amended) ~~A~~ The microfluidic ~~unit array~~ device according to Claim 4, wherein said ~~substrate~~ second plate is plastic.

Claim 6. (currently amended) ~~A~~ The microfluidic ~~unit array~~ device according to Claim 4, further comprising electrodes positioned for contact with liquid in said receiving reservoirs.

Claims 7-8. (Canceled)

Claim 9. (New) The microfluidic device of Claim 1, wherein said first plate is integral with said second plate.

Claim 10. (New) The microfluidic device of Claim 2, wherein said array of microfluidic units is comprised of rows of 8 units.

Claim 11. (New) The microfluidic device of Claim 4, wherein said first plate is integral with said second plate.

Claim 12. (New) The microfluidic device of Claim 4, wherein said first plate, second plate and film are plastic.

Claim 13. (New) A method for performing a plurality of simultaneous operations using a microfluidic device comprised of a first plate having an array of sample receiving elements and a second plate having an array of microfluidic units wherein each sample receiving element is in fluid communication with one microfluidic unit, the method comprising:

contacting the sample receiving element array with a plurality of samples to transfer the samples into the receiving elements;

transferring the samples from the receiving elements into the microfluidic units; and

operating on the samples in each microfluidic unit.

Claim 14. (New) The method according to Claim 13, wherein said first plate is integral with said second plate.

Claim 15. (New) The method according to Claim 13, whereby the transfer of the samples into the receiving elements occurs by capillary action.

Claim 16. (New) The method according to Claim 13, wherein said operating is the separation of each sample into individual components.

Claim 17. (New) The method according to Claim 13, wherein in said contacting step all the samples are transferred approximately simultaneously, and in said transferring step all the samples are transferred approximately simultaneously, and in said operating step all the samples are operated upon approximately simultaneously.